

Remarks

This Election is responsive to the Restriction Requirement issued **October 3, 2005**.

Summary of The Restriction

Restriction to one of the following inventions was required under 35 U.S.C. 121:

- I. Claims 21-28, drawn to a liquid cooled modular electronic system, classified in class 361, subclass 699.
- II. Claims 29-32, drawn to a method for cooling an electronic module, classified in class 29, subclass 830+.
- III. Claims 1-14, drawn to an electronic system, classified in class 174, subclass 252.
- IV. Claims 15-20 and 33, drawn to a liquid cooling module apparatus, classified in class 165, subclass 80.4.

Election

In response to the Restriction Requirement, Applicant elects, with traverse, to prosecute Invention I, claims 21-28.

On page two of the Office Action, the Examiner asserts that “the cooling liquid need not be received into the sealed electronics module”. The Examiner asserts that “instead it can be wrapped around the electronic housing module and dissipate heat away from the housing.” Respectfully, this is not the claimed invention. Reference to the claims, the specification, and the background make clear that internal liquid cooling is claimed, not cooling by externally wrapped means. While some cooling apparatus may take the approach suggested by the Examiner, the claimed invention calls for the cooling apparatus to be **“arranged within”** the sealed electronics module.” (Claim 1) The cooling apparatus will use a cooled liquid internal to the sealed module. Similarly, claim 21 recites “means **arranged within** the sealed electronic module for dissipating heat. ... using liquid”. (Claim 21). Likewise, claim 29 recites “receiving

a liquid into a sealed electronics module.” (Claim 29) Thus, it is unequivocal that the liquid enters the sealed electronics module. Thus, the arrangement suggested by the Examiner is impossible within the context of the claimed invention.

The Examiner relies on being able to have the liquid “wrap around” the module as the basis for the product and process of use restriction requirement applied to Inventions I, III, IV, and II. As has been demonstrated above, the suggested “wrap around” arrangement is impossible within the context of the claims. Thus, Applicant respectfully requests that this restriction requirement be removed. Additionally, the Office Action, at the bottom of page 2, provides a conclusion for the restriction but provides no reasonable examples. According to MPEP 806.05(e), “[t]he burden is on the Examiner to provide reasonable examples that recite material differences.” An example (e.g., wrapped around) that is clearly outside the claimed invention (e.g., externally cooled liquid used internally) is not a reasonable example. Since the Examiner has not provided a reasonable example, a prima facie case for the propriety of the restriction requirement has not been presented. Thus, Applicant respectfully requests that the restriction be withdrawn.

Claims 21-28 and claims 29-32 are proper method and apparatus claims that should not be restricted. For example, independent claim 29 recites “receiving a liquid into a sealed electronics module” and “providing the liquid to a liquid cooling module.” Similarly, independent claim 21 recites sealed electronic modules receiving heat dissipated “using liquid that is transported between the sealed electronics module and the external liquid cooling module.” (Claim 21) These are proper method and apparatus claims and thus Applicant requests that the restriction requirement be removed.

On page 3 of the Office Action the Examiner asserts that Inventions I and III, IV are related as combination and sub-combination. The Examiner asserts that the combination as claimed does not require the particulars of the sub-combination because (regarding group III), the module does not need to be sealed against noise and so on. The limitation upon which the Examiner relies is found in dependant claim 5, not in independent claim 1. Even if the assertion were relevant, which it is not, it is improper to premise a restriction for an entire independent

claim set on a limitation described in dependant claim 5. Additionally, the Examiner asserts that the combination as claimed does not require the particulars of the sub-combination because (regarding group IV) the heat can be dissipated from the liquid cooling module in a variety of ways. Once again this is irrelevant. How heat is dissipated from the liquid cooling module does not alter the fact that the heat is dissipated from the external liquid cooling module and that the heat came from components inside a sealed module where the components were cooled by a liquid. Various approaches for dissipating the heat are provided in dependant claims 16-20. Thus, the basis for the combination and sub-combination restriction requirement are faulty and Applicant respectfully requests that this restriction requirement be lifted.

On page 3 of the Office Action the Examiner asserts that Inventions III and IV are related as sub-combinations disclosed as usable together in a single combination. The Examiner asserts that the sub-combinations are separately usable because Invention IV could be used to cool a remote control car or audio speaker. Invention IV includes claims 15-20 and claim 33. Claim 15 recites "connectors configured to provide detachable connections ... for communicating liquid between the liquid cooling module and a sealed electronic module." (Claim 15). Additionally, Claim 15 recites "providing the cooled liquid to the sealed electronics module." (Claim 15). It is unclear to the Applicant how the apparatus described in claim 15 could be connected to a remote control car when the apparatus is configured to be connected to a sealed electronics module. Thus, Applicant respectfully requests that this restriction requirement be lifted.

Respectfully submitted,

Nov. 3, 2005



PETAR KRAGULJAC (Reg. No. 38,520)
(216) 348-5843